

Buffalo Rapids Irrigation Project District 1

Lateral 20.6 Conversion Project

In the late 1990's, BRIP and NRCS personnel completed an assessment of the two irrigation districts within the BRIP. The analyses resulted in the development of canal efficiency ratings and pipeline replacement rankings. Over the past 10 years, BRIP has replaced numerous open lateral systems with closed pipeline networks that have conserved millions of gallons of water each year. The next priority for BRIP District I is the replacement of Lateral 20.6 with a closed pipeline. From a field visit in October 2009, it was clear that the Lateral experienced severe vegetative overgrowth, seepage loss, and has poor canal conditions. Replacing the open lateral system with a closed pipeline will eliminate seepage for the entire Lateral, improve irrigation efficiency and effectiveness, conserve water pumped from the Yellowstone River, and eliminate total maximum daily load (TMDL) concerns from discharging water back into the Yellowstone River. Using soils information and canal geometry, seepage calculations show that Lateral 20.6 loses approximately 2.12 cfs (192 million gallons per year). The proposed improvements will help eliminate seepage, improve water and soil quality, improve water management, and increase crop yields.

The proposed project will improve conservation, management, development, and preservation of land and water resources. Seepage losses currently amount to an annual revenue loss of approximately \$101,150 per year due to reduced crop production. Implementation of the proposed pipeline conversion will result in improved irrigation efficiency, increased crop yields, and restore lost revenue to the local economy.

The conversion of Lateral 20.6 to a closed pipeline system would provide the following benefits:

- Elimination of seepage
- Improved water delivery efficiency
- Improved irrigation efficiency
- Conservation of water pumped from the Yellowstone River
- Elimination of TMDL concerns from irrigation water discharge into the Yellowstone River
- Increased crop yields
- Improved water quality
- Restoration of lost revenues to the local economy
- Maximized beneficial use of diverted water
- Increased river flows
- Improved fish and wildlife habitat
- Increased local and state tax base
- Sustained agricultural production

Grant Request Amount:	\$100,000.00
NRCS EQUIP Match Amount:	\$312,051.50
Buffalo Rapids Irrigation Project Match Amount:	\$134,461.00
Estimated Total Project Cost:	\$546,512.50

Buffalo Rapids Irrigation Project District I sincerely appreciates your consideration of this project and hopes that you will find it as important and necessary as our residents and your constituents have.

